New England Fishery Management Council

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E.F. ñTerryò Stockwell III, *Chairman* | Thomas A. Nies, *Executive Director*

MEETING SUMMARY

Herring Committee

DoubleTree by Hilton, Danvers, MA

January 13, 2016

The Herring Committee (Committee) met on January 13, 2016 in Danvers, MA to review Herring Advisory Panel (AP) input and discuss: 1) Amendment 8 to the Atlantic Herring Fishery Management Plan (FMP), 2) the potential for using state port-side monitoring data to monitor the river herring/shad (RH/S) catch caps, 3) 2017-2022 research priorities for Atlantic herring, 4) a future action to consider revising the Georges Bank haddock catch cap accountability measure (AM), and 5) address other business, as necessary.

MEETING ATTENDANCE: Mr. Peter Kendall (Chairman), Dr. Matthew McKenzie (Vice-Chairman), Mr. Vincent Balzano, Mr. Peter Christopher (NMFS/GARFO), Mr. Doug Grout, Mr. John Pappalardo, Dr. David Pierce, Ms. Mary Beth Tooley, Mr. Jeff Kaelin (MAFMC), Mr. John McMurray (MAFMC); Mr. Chris Weiner (Herring AP Chairman); Mr. Tom Nies, Dr. Rachel Feeney, and Ms. Deirdre Boelke (Council staff); Ms. Carrie Nordeen (NMFS/GARFO); Mr. Mitch MacDonald (NOAA General Counsel); Dr. Jonathan Deroba (NMFS/NEFSC); and Dr. Michael Wilberg (UMD/MAFMC SSC). In addition, about 20 members of the public attended.

SUPPORTING DOCUMENTATION: Discussion was aided by the following documents and presentations: 1) meeting memo, 2) meeting agenda, 3) December 10, 2015 PDT meeting summary, 4) staff presentation, 5a) Amendment 8 action plan (Version 2, December 15, 2015), 5b) Amendment 8 scoping comments summary, December 21, 2015[1], 5c) Presentation by Dr. Michael Wilberg on Management Strategy Evaluation, 6) 2010-2014 NEFMC research priorities and data needs, 7) PDT memo on Georges Bank haddock AM (January 5, 2016), and 8) Herring Advisory Panel DRAFT meeting motions, January 12, 2016.

KEY OUTCOMES

- A recommendation that a Management Strategy Evaluation be conducted to support developing measures in Amendment 8 for the Acceptable Biological Catch control rule for Atlantic herring.
- Tasking the Herring PDT with several analyses regarding localized depletion.

[1] All scoping comments available at. http://www.nefmc.org/library/amendment-8-2

- Support for using state portside data to monitor RH/S and haddock catch caps.
- Recommendations for 2017-2022 research priorities for herring.
- Tasking the Herring PDT with examining the potential for using the same approach of the Georges Bank yellowtail flounder cap AM for the Atlantic sea scallop fishery for the GB haddock cap AM in the Atlantic herring fishery, and reviewing the current AM area closure for its continued relevance.

OPENING REMARKS

Chairman Peter Kendall opened the meeting at 9:30 AM and noted that Dr. Jonathon Deroba rather than Dr. Sarah Gaichas will be speaking about the Northeast Fisheries Science Center Work Group on Management Strategy Evaluation. There were no other announcements or changes to the agenda.

HERRING ADVISORY PANEL REPORT

Herring Advisory Panel (AP) Chairman Mr. Chris Weiner gave the AP report from their meeting on January 12, 2016. Regarding the Acceptable Biological Catch (ABC) control rule for Atlantic herring, the AP supports a Management Strategy Evaluation (MSE) approach. Regarding localized depletion, the AP recommends that the geographic area(s) in question be clearly defined prior to further analysis or development of related alternatives; that analysis should use scientific, biological and ecological data; and that the goals and objectives of the Area 1A midwater trawl closure be examined to see if they are being accomplished. The AP recommends the Study Fleet data be examined for its potential use in managing fisheries. The AP recommends that the Georges Bank haddock catch cap for the 2015-2016 groundfish fishing year be increased by whatever means possible, and that the accountability measure (AM) be made similar to the GB yellowtail flounder AM in the Atlantic sea scallop fishery. The AP supports, as a research priority, that Atlantic herring be examined both as predator and prey in any ecosystem studies in the northwest Atlantic. The AP recommends that fishery performance evaluations be conducted for all New England fisheries, similar to what occurs in the Mid-Atlantic.

Mr. McMurray asked for additional background on the motion to base localized depletion-related analyses on scientifically, biologically and ecologically-based data, indicating that much of the data necessary does not exist. AP Chairman Weiner indicated that the AP acknowledges data limitations, but supports management based on science. Chairman Kendall indicated that the Committee will work today on directing the Plan Development Team (PDT). Dr. Pierce asked if the AP discussed what the MAFMC performance reports entail. AP Chairman Weiner indicated that the AP did not discuss the details, but the reports focus on explaining what drove the landings and economics for a given year. Mr. McMurray explained that it is a way to contextualize the science. Dr. Wilberg explained that the MAFMC started doing performance reports for setting ABC for data poor stocks. The reports have helped the Scientific and Statistical Committee (SSC) to understand why allowable catches have or have not been achieved, have been used more for the data poor stocks, and have been helpful.

AMENDMENT 8 – ACCEPTABLE BIOLOGICAL CATCH CONTROL RULE

Introduction by NEFMC Executive Director Tom Nies

Mr. Nies explained why the Council is considering using a Management Strategy Evaluation (MSE) for developing Atlantic herring Acceptable Biological Catch (ABC) control rule alternatives in Amendment 8. The approach is a bit different than the typical process of developing alternatives, in that, earlier in the process, there is more public discussion of management objectives and technical analysis to evaluate tradeoffs. In 2014, NMFS reviewed all stock assessment programs. An outcome was a commitment to expanding the use of MSE approaches. In 2015, the NEFMC SSC recommended a MSE approach for Amendment 8, and the Northeast Regional Coordinating Committee discussed that the herring ABC control rule would be a good first MSE for the NEFMC.

Dr. Pierce asked about the experience level of the Council staff with MSE. Mr. Nies indicated that the staff has had several discussions of MSE, but none have actually done an MSE. The staff is skilled at facilitating public processes and gathering input, which is an important part of the process. There have been preliminary discussions with the NEFSC about providing the necessary technical support, either in-house or through contracts. Mr. Nies introduced Dr. Michael Wilberg, Associate Professor at the University of Maryland.

Presentation by Dr. Michael Wilberg on Management Strategy Evaluation

Dr. Wilberg presented an overview of Management Strategy Evaluation a tool that was first used in the mid-1980s by the International Whaling Commission for harvest control rules. MSE has been used globally, particularly in Australia. Management decisions always have a degree of uncertainty and risk. MSE uses a simulation model to determine if an approach is likely to achieve the objectives, focusing on what is knowable. Steps include determining objectives, options for management action, and performance metrics, and evaluating the options in an iterative approach. Two examples were provided: for the King mackerel fishery in the South Atlantic and a control rule MSE for the MAFMC. For King mackerel, there were stakeholder workshops focused developing a vision statement and management options for the fishery. The MAFMC evaluated expected performance of generic ABC control rules. He suggested that MSE is a good opportunity to test options before implementation and recommended that MSEs should be iterative and involve both stakeholders and managers.

Dr. Pierce reiterated the importance of accounting for assumptions and asked if the MSE for King mackerel resulted in successful objectives and strategies. Dr. Wilberg explained that the stakeholder groupôs initial expectations were not possible; most were surprised about how little was known about mackerel. Mr. Grout asked if a different model is used for each MSE and if there are parts of a model that can be draw from for future MSEs. Dr. Wilberg indicated so, but often times objectives are similar, as are the population dynamic models. In the King mackerel MSE, there was an objective that human consumption of mercury be reduced. Although this could not be modeled, the MSE gave people a forum to deliberate around topics like this in a way they had not had the opportunity to do. A very different model is needed if there are spatial considerations. Mr. Grout asked if the feedback and model modifications continue after implementation. Dr. Wilberg was not aware of any groups that use MSE as an annual update, but some have set triggers for a subsequent MSE. Ms. Tooley observed that some of the objectives in King mackerel example were determined to be unrealistic or competing and asked if that was a

problem. Dr. Wilberg said that it is not a problem to have unachievable or competing objectives, especially early in the process. Early on, it is helpful to know the key objectives to determine what can be evaluated and avoid backtracking. He advised having general objectives (e.g., high harvest) rather than specific (e.g., specific catch level), noting others would disagree. On competing objectives, it depends on the stakeholders and process, how closely agreement is achieved in the end. Dr. McKenzie asked how independent the MSE technical team is from the team that developed the fishery plan. Dr. Wilberg indicated that it has varied widely; where MSE is a normal part of management, the stock assessment group does the MSE. Other MSE teams are completely independent. Either way, it requires close coordination with the people already working closely with the fishery data. For King mackerel, we were outside the normal process and seen as neutral. Mr. Kaelin asked if changing ocean habitats can be modeled in a MSE, that he has been surprised that herring have not migrated in the face of climate change. Dr. Wilberg indicated that it is theoretically possible, but the appropriate level of abstraction needs to be considered. MSEs are better at ranking options rather than making absolute estimations. Mr. Nies noted that, in the King mackerel example, outcomes were not adopted by the SAFMC, in part, because managers were not involved in the process. Dr. Wilberg indicated that Council members should have been included. They were not, because there was concern that the other stakeholders might not speak their minds as much. Unfortunately, there was not much effort after that MSE to do outreach or communication.

Overview by Dr. Jonathan Deroba of the NEFSC MSE Working Group

Dr. Deroba explained that the NEFSC recently formed a MSE Working Group composed of staff from diverse branches. The NEFSC has not yet completed a full MSE, but has done simulations that would support MSE. NMFS is working on building MSE capacity in the regions, and each Science Center has been given funds to support MSE. The NEFSC has been discussing how the funds should best be used, potentially distributing them among existing employees or contractors. Collaboration with the Council and stakeholders is important. The Group supports independently-facilitated stakeholder meetings and has discussed potential topics for MSE (e.g., ABC control rules, resolving respective patterns, survey/assessment frequency). The group feels that the Atlantic herring ABC control rule would be a good first MSE: there is an immediate need, some of the technical work has been done, there is a large literature of control rule MSEs to learn from, the stakeholders are engaged, outcomes may be more applicable to other finfish fisheries relative to a MSE for scallops, and herring is not the most controversial stock or highest value fishery. The NEFSC or contractor might be best suited for the technical work, while the Council staff would be good for public process facilitation.

Dr. Pierce asked for more clarification on why herring would be a good first candidate, because it would be more applicable to cod than scallops would be. Dr. Deroba clarified that, while cod and herring are very different, they are more similar than scallops is with either; there may be more opportunity for generalization by starting with herring. Dr. Pierce also asked if having a retrospective pattern in the assessment would negatively affect MSE. Dr. Deroba indicated that it would not, and various control rules could be tested for their robustness to a biased assessment.

Herring PDT update

Dr. Feeney reviewed the Amendment 8 goals and objectives and the current ABC control rule, work to date to support development of alternatives, a MSE process proposal, and the amendment timeline. In 2015, the Ecosystem-Based Management (EBFM) PDT advised that

several possible control rules can account for herring as forage (e.g., keep B > B_{MSY}, reduce catch to promote rebuilding) and suggested six rules to consider. The EBFM PDT suggested that potential ABC control rules should be evaluated through simulation to reduce risk of depletion. The SSC reviewed this preliminary work and supported a MSE approach. In the spring of 2016, a public stakeholder workshop is proposed to gather input on objectives, which would be considered by the AP, Committee, and Council prior to selecting the control rules to be evaluated and doing the simulations. There would also be a public process to review the outcomes and inform potential iterations prior to the Council selecting the Range of Alternatives. The goal is to have Amendment 8 implemented prior to developing the 2019-2021 specifications.

Ms. Tooley asked for clarification on the EBFM PDT recommendation that trophic effects may be more effectively managed by tools other than an ABC control rule. Dr. Feeney clarified that if, for example, there are localized depletion concerns at a scale smaller than the stock area, a stock-wide ABC control rule would not address them. Mr. Pappalardo asked about plans for a MSE peer-review. Ms. Feeney indicated that there are no specific plans for a peer-review, but one would likely occur after the MSE is complete but before Amendment 8 is finished.

Committee discussion

Chairman Kendall encouraged the Committee to develop a recommendation about MSE.

> **Motion #1 (Tooley/Kaelin):** The Herring Committee recommends to the Council that a Management Strategy Evaluation be conducted to support developing measures in Amendment 8 for the Acceptable Biological Catch control rule for Atlantic herring.

Dr. Pierce expressed support for the motion despite initial reservations, noting the Risk Policy Working Group made a similar recommendation.

Public comment

Mr. Shaun Gehan (Ad Hoc Pelagics Coalition) ï A MSE is worth undertaking. There is a similar process going on by the ASMFC with menhaden. This past September, there was a goals and objectives workshop facilitated by Dr. Michael Jones of Michigan State University who worked on the Great Lakes project that Dr. Wilberg mentioned. I went in skeptical. There were people from the environmental community, recreational fishing, the bait and reduction fisheries, scientists like Matt Cieri, stock assessment scientists. It went on for two days, where they were trying to broad objectives, but also drill down on operational objectives. The process worked well, which makes me optimistic that the process can be used here. The question is what comes out of it. The goal may be to evaluate control rules, but there may be a broader process to develop a model to keep this from being a cycle of the same issues and debates. I hope to resolve some issues. Everything starts with a first step, and this seems reasonable.

Chris Weiner (CHOIR, ABTA) ï This seems like something worth looking into. Is the information that goes into it, is it peer reviewed? How will the contracting work? Is it an open process? Who makes the decision on the contract? [Ms. Feeney clarified that the MSE would use the existing information, which has been peer-reviewed over time, but data needs may be highlighted. Contracting details are still being worked out with the NEFSC.]

Committee discussion

Motion #1 **carried** on a show of hands (9/0/1).

Chairman asked if there was any other guidance about the MSE. Mr. Kaelin suggested that there be a professional facilitator for the workshop, indicating that the menhaden workshop went very well. Ms. Tooley commented that defining the stakeholder group has been done in a variety of ways and did not suggest a model of only using technical staff; the details may be an appropriate conversation for the Executive Committee. Mr. Pappalardo reiterated the need for early public buy-in, which the Executive Committee and Council should define as a goal. Dr. McKenzie suggested there be a conversation about the peer-review would occur, which should be independent and transparent.

AMENDMENT 8 – SCOPING COMMENTS AND LOCALIZED DEPLETION

Herring PDT update

Dr. Feeney reviewed current spatial management approaches in the fishery (e.g., Area 1A seasonal midwater trawl closure) and summarized PDT discussions about localized depletion. The PDT discussed potential technical analyses to support developing the problem statement and measures, and seeks direction from the Committee. The PDT looked preliminarily at 2006-2013 changes in catch (by gear type, per trip, per tow) by statistical area for cod, dogfish, and pollock within a week of herring catch. No significant trends were discovered, which does not mean that localized depletion is not occurring; other treatments of the data may be necessary.

Dr. Feeney summarized the Amendment 8 public scoping comments. There were 290 comments signed by 468 people plus three large form letters signed by about 28,000 people. Most comments supported addressing concerns about localized depletion and explicitly accounting for herringôs role in the ecosystem, and thanked the Council for undertaking Amendment 8. A few comments were concerned with the goals of Amendment 8: that accounting for herring as forage in the assessment is adequate, the focus should be on improving the assessment, and localized depletion lacks definition and sufficient scientific evidence. Comments identified current problems, desired outcomes, and specific ideas for alternatives.

Dr. Pierce asked if there were scoping comments about the rationale for the current fixed gear/purse seine area adopted through Amendment 1. Dr. Feeney pointed to comments supportive of that closure and that Amendment 8 should expand upon the benefits realized by it.

Committee discussion

Dr. Pierce noted that it would be useful to reflect on the text in Amendment 1 and read a paragraph indicated that Council believed that there would be positive impacts to the ecosystem if Area 1A was closed seasonally, though they were not quantifiable due to lack of information. He noted the PDT warnings for data constraints.

> **Motion #2 (Pierce/Grout):** The Herring Committee tasks the Herring PDT with the following analysis:
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> (1) define ñinshoreò as all areas shoreward of the 12 mile territorial sea line;
> (2) identify areas within the 12-mile line where herring fishing seasonally intensifies (e.g., Ipswich Bay, Nantucket Shoals);

(3) determine and compare midwater trawl trip catches over time in each area, considering variation in tow-specific catches, accounting for tow time, number of tows and trip duration; and
(4) determine if, over the time of intensified fishing, catches could only be maintained by longer tows, more tows and/or longer trips, thereby indicting local depletion (e.g., F much higher than F set for entire stock).

Rationale: to help the PDT with direction for analyses for areas to examine. The area in the motion was highlighted in the scoping comments for where local depletion may be occurring.

Mr. Kaelin also quoted Amendment 1, about herring retaining school structure despite biomass reductions and that herring midwater trawlers do not disrupt herring schools in the long-term. He noted an Overholtz publication that the way to protect against localized depletion is to protect the overall biomass. He supports the motion, noting that the AP recommended that the geographic areas be clearly defined. Is there analysis to support the 12 mile distance? We should identify localized areas of gear conflict. Ms. Tooley did not support the motion, statine it is premature and way too specific, suggesting rather a look at where/when fishing is occurring by all fisheries and gear types. We should have info on where fishing is taking place relative to 12 mile boundary. She was uncertain whether a fishing mortality rate can be determined in any sub-area. In listening to the AP, she heard many concerns about gear conflicts. There was a perception that if the herring gear comes in, the predator species are disrupted.

Public comment

Mr. Glenn Robbins (purse seine fisherman, F/V Western Sea, ME) ï Iôve been up and down the coast for 50 years, and there is localized depletion. Believe it. Iôll give you one instance. Jeffries Ledge is not too far off shore, 23 miles. On the northern end of that back in the 60s up to the 90s, if I couldnôt find fish anywhere else, I could always go there and get a trip of herring. It was always loaded with herring, and the tuna boats were usually out there. It looked like a city out there. I didnôt always go there, because it was a ways off from where I was fishing, but that was depleted with an IWP out of Rockland, but it took about a month and a half in the late summer in the 90s that they wiped that out. It used to have a lot of haddock and codfish up there too. They are gone. And pollock. They havenôt come back and I canôt figure out why. That got stripped so bad that it has never come back. The problem is trawlers are so huge, they take so many herring and keep hammering and hammering. Seiners are smaller boats and we donôt do it. Localized depletion happens every year in Ipswich Bay. Thank you.

Mr. Patrick Paquette (recreational fishing advocate, MA) ï I support the motion. I would be happy to sit with staff or Council members and review the fishing reports published in the fishermenôs weekly magazine on specific vessels that give weekly reports about where they fish on the back side of Cape Cod. Multiple vessels, including the one that Iôm involved with, at different times of year when the midwater trawl fleet arrives ï usually around ten days, two weeks. When they are done fishing, we move, because the striped bass move, because the striped bass move. Our businesses travel. Our whole fleet moves, because the predators react to, although it may be temporary, localized depletion of the forage base in the area thatôs holding our predators, and then we have to go fish somewhere else. Whether thatôs the same body of striped bass or not, people would argue about that. We know that the fish that we are fishing on that time of year disappear when the fleet comes through. I can show you in fishing reports. This

is published, public information. I would invite any member of the Council to come out, and I will show you that this spring when it happens again. It happens every year. Thank you.

Mr. Roger Brisson (commercial and charter fisherman, Gloucester, MA) ï There is a depletion occurring. I know that, because Iôve been on the water for over 40 years, and the ripple effect of the declining of the stock. On Cashes, in the fall of every year, September to November, there is a big body of herring that comes in by Cashes to spawn, and then they leave for down by Salem, Beverly, and Gloucester. They hang out there for a long time, where they feed. Codfish come in. Iôve been a cod fisherman for a very long time. I did very well there. Coincidence? 15 year ago, when the midwater trawlers started, right away, within a year, the decline of my catch started. I used to look for big bodies of fish there on my fish finder. Watching the gannets. The herring were gone. We use to catch a lot of tuna and stripers right within a couple miles of Gloucester harbor. Hankering up. I did that overnight. I did very well over the years. The last 3-4 years, because the herring arenôt there, the bass arenôt there. In Gloucester the fishery on striped bass, I run charters, if I donôt run 15 miles out towards Nahant, thereôs not much bait inside. Thereôs mackerel, but no herring. Not like I used to. My information is from 40 years of fishing. Pretty good report. This is a good thing. Thank you.

Mr. Steve Weiner (CHOIR) ï David, Is this a motion to set something into being or for PDT analysis? [Dr. Pierce clarified that it is a PDT tasking motion; he wanted more analysis of the herring fishery effort itself. It may result in no finding, but more information is needed.]

Mr. Steve Weiner ï Now, because ASMFC doesnôt allow any herring fishing for January-May in Area 1A, and then the 4 month purse-seine only kicks in, thereôs really a nine-month period, maybe even more, when there is no midwater trawling. I would contend that if you want to study localized depletion, you need to go back to the time and places where it was occurring. Back in the early 90s through about 2007. I would not restrict it to 12 mi. Take VMS information, figure out where and when there was fishing, put it on a chart, and then figure out what drove this whole thing in the first place in Amendment 1. Over that period of time is when we got engaged to fight. To study anything other than that doesnôt get at the problem, but I appreciate the attempt.

Mr. Jim Ruhle (commercial fisherman, NC/RI) ï Where did the 12 mi boundary come from? [Dr. Pierce clarified that he could have gone with Area 1A, but is focused on what appears to be the principle concern relative to the take of herring in the context of the local depletion question. 12 miles is an easy boundary, since it exists on charts. Itôs the territorial seas line, so why not use that as a start?] Itôs clear that you are primarily talking about Area 1A. I fish exclusively in Area 2. There is where we have to have different discussions. Itôs going to come as quite a shock to all of the state-registered boats that consider themselves an inshore fleet that canôt fish outside of three miles. They are in a different category. The 12 is a different number that what Iôve heard with traditional inshore. I canôt grasp what you are asking in #4. [Dr. Pierce clarified that we all need to have a better understanding of the nature of fishing operations of the midwater trawl fleet. When they first get into an area, how long does it take to fill the hold? One tow? Over how many hours? As time goes on, does it take longer to catch the fish, harder to find? That would suggest that there is less herring. Obviously, there is complication, because herring move away to other areas. This is his first shot to get additional insight on the nature of the fishery that is occurring there.] Page 96 or 98 in Amendment 1 speaks specifically to the way fish behave after they are towed through by midwater trawlers, single boats, and purse seiners. Itôs quite surprising how fast they actually come together. However, information coming out of Study Fleet will give

the PDT CPUE ï right to the minute of how long that boat towed and what it caught on each particular tow. Over 90% of the midwater fleet is enrolled in Study Fleet. Recognize how powerful a tool Study Fleet is. Itôs cooperative research at its finest. The potential for information gathered out of it and how quickly itôs sent to the NEFSC. That day. My only concern is that in Area 2, thereôs one place called the Pier Tow, where youôre in ¼ mile from shore. Itôs scary, but a lot of boats do it. You canôt have local depletion in an area where there isnôt a resident population. Area 2 fish are constantly migrating through. In 2012, with conditions similar to what we experienced this year with water temperatures 3-4 miles off the beach too warm, All the herring were caught in Narragansett Bay, because there was a warm water fence keeping them penned in there. I appreciate the attempt.

Mr. Chris Weiner (CHOIR, ABTA) ï I donôt want to debate localized depletion. Itôs how the ocean works. If we have to define it, weôll define it. The only way to study 1A is to look back through late 90s ï 2006, we never used to see the boats. All of a sudden, they were there all day, and the next day, and the next day. 12 miles is a good stab. I would not bother with that in 1A. 12 miles wonôt get at a lot. Perhaps look at that off Cape Cod where the problem still exists. You wonôt learn much unless you look back 15 years and out 50 miles. You wonôt learn anything in 1A, because they come in for a few weeks now. This is the right kind of path.

Committee discussion

Dr. McKenzie stated that there is a difference between momentary disruption of schools and localized depletion, and that there is not a uniform distribution of fish in the water; just managing the stock as a whole assumes a uniform distribution. He agreed that there is a scientific component, but NEFMC, ASMFC, DFO Canada, SAFMC have localized depletion measures as policy. He suggested PDT look to scoping comments for ideas for analysis. Mr. Grout felt the motion is a start, and there are other analyses that the PDT can do; this is a needed conversation, because it has been discussed for a long time. He was unsure what the analysis would find, sensing the problem is a user conflict, not a gear conflict (e.g., mobile gear sweeping up a gillnet), where efficient vessels come through and then others relying on the predators indicating that the predators have moved on. What the right thing to do here will be determined, but the overall herring resource is not being harmed, as B is double B_{MSY}; herring is fully recovered, despite concerns about fishing practices. Mr. Balzano agreed with many of the comments, stating that it seems the problem is pulse fishing and user group conflicts. He was concerned that the motion does not capture where all the fishing is occurring and doubted CPUE could be linked to depletion. Mr. Christopher indicated discomfort with the motion, because it outlines a management approach before identifying a problem. Mr. Kaelin supported the motion, but wished for other analyses, such as examining striped bass fishing on the back side of the Cape to determine where the conflict is. He was concerned with the 12-mile border and limiting the analysis to midwater trawls, noting depletion of Ipswich Bay with the seiners up inside years ago. He stated that this is, and has always been, a market issue, citing the PDT report that the method of removal should not be relevant.

Motion #2 **carried** on a show of hands (6/3/1).

Rather than make additional motions, the Committee developed a list for the PDT [see below] and made additional comments. Ms. Tooley agreed that the method of removal is not relevant, and that ñuser conflictò may be more appropriate than ñgear conflict.ò Both midwater and purse seines pulse fish. The fleets work together. Many years ago, she recalled fishing in MA Bay

along with many purse seines ï one setting around another. She was the person on-board the IWP (internal waters processing) vessel buying herring over the side, all from purse seines. Mr. Kaelin indicated that people not in the herring fishery believe there is unrestrained harvest of fish that could be eaten by something; 80% of the fish remain in the water currently. Mr. Kaelin and Dr. McKenzie asked for identifying the forage need, noting that there is not a durable ecosystem model. Ms. Nordeen recalled the last stock assessment, using consumption data and fishing mortality, there was a 1:4 ratio of fishing mortality to predator consumption used. Dr. Pierce spoke of the cod spawning closures in fall and spring and the herring fishery in the late summer and fall in Area 1A, and wished for more analysis of the importance of herring to cod in Ipswich Bay.

Public comment

Mr. Ray Kane (Cape Cod Commercial Fishermenôs Alliance) ï Weôve seen Derobaôs analysis of 1A and how much has been set aside for forage. What the Council needs to understand is the fleet of boats you are impacting. There may be 90 miles offshore, but thatôs not going to keep the tuna within 50 miles of shore where the boats have access to them. If we just look at the Derobaôs study, and I agree that the stock is in fine shape, but it all may be offshore. Consider the small-boat fleet trying to catch predator fish that feed on 5-year old herring.

Mr. Gehan ï To follow on, look at time series. Look at the role of changing water temperature over time. Iôm leery about time-series analysis that doesnôt include that. It may answer a lot of questions.

Committee discussion

Mr. Pappalardo spoke of the public comments and what he felt were consistent themes ï a strong desire to replicate the Area 1A closure off the Cape and Islands and extend the 1A closure to year round. He felt that the concerns are not about the relative health of herring or the macro predator-prey relations, but the interactions between the midwater trawl fishery and all others ï that it is more a policy than scientific decision. He noted stable herring landings over time regardless of closures, and that the public comments put cause and effect together. He cautioned that there may not be robust data that proves 240 commenters are not lying. Ms. Tooley hopes the analysis will be used to develop a problem statement; that the public comments are informative, but that the Council also needs to look at the data in making recommendations. Mr. Pappalardo noted a commonality in the scoping comments, that the presence of midwater trawling in nearshore waters, and the intense fishing that ensues, does not have an impact on the overall herring resource, but is felt by all others trying to use the area over time. Mr. Kaelin noted that if the analysis identifies a problem in discreet times or areas, then perhaps there could be local, temporary closures. He recalled use of the Research Set-Aside in Ipswich Bay where a block was given up last year. He did not feel like a 30-mile buffer or singling out a gear type would be appropriate. He does not discount perceptions about a local area, but when trying to manage a coastal stock complex, the Council should ensure the target species is not depleted rather than vilify one gear type.

Consensus statement: The Herring Committee tasks the Herring PDT with the following analyses:

- Identify herring fishing locations, by season and gear type.
- Identify predator fishery (e.g., striped bass, tuna) locations, by season and gear type.
- Identify any evidence of pulse fishing (i.e., multiple herring vessels in a concentrated time/area).
- Examine ideas for analysis identified in the public scoping comments for Amendment 8.
- Repeat the preliminary PDT analysis (by Dr. Deroba), examining Area 1A in the years prior to 2006 (i.e., Amendment 1) and examining catch of predators in the second week after herring catches (Do predators hang out before they get hungry?).
- How much herring is set aside currently to account for the forage needs of predators? What is the best estimate of how much herring is sufficient for forage?
- Examine predator/prey relationships between cod and herring in Ipswich Bay.
- Examine potential impacts (biological, economic, social) to different fisheries (herring, tuna, striped bass, etc.) of closing the following 30-minute squares to midwater trawl gear year-round: 99, 100, 114, 115, and 123.
- Calculate the percent of the total Atlantic herring stock area each of the following 30-minute square comprises: 99, 100, 114, 115, and 123.

RIVER HERRING/SHAD CATCH CAPS

Herring PDT update

Dr. Feeney explained that in September 2015, the Council considered a motion to request that NMFS use state portside monitoring data to monitor the river herring/shad (RH/S) catch caps in the Atlantic herring fishery. The motion was postponed to the January 2016 Council meeting, as a number of questions arose about the matter. Dr. Feeney presented what the portside data are, how they have been used to date, how the RH/S catch caps are currently monitored, and issues pertaining to potential use of portside data in monitoring, and PDT recommendations.

Dr. McKenzie asked if RH/S cap monitoring is the subject of any litigation. Dr. Feeney and Mr. MacDonald indicated that it is not.

Committee discussion

Dr. Pierce highlighted the public comment in the December 10 PDT meeting summary, that there are offload locations that cannot be sampled currently, doubting that the Council would require sampling and that there would be sufficient funds for 100% monitoring. His staff has expressed some concern about whether there would continue to be high participation by vessels in the bycatch avoidance program.

Motion #3 (Pierce/Grout): The Herring Committee supports the state portside sampling programs and moving towards using the data to monitor catch caps.

Mr. Grout noted asked if this would be used as a substitute motion to the Council motion.

Motion #3 was **withdrawn**.

Mr. Grout supported the motion, but noted the PDTôs concerns about data transmission times and resolving differences between the two state programs. He wondered if the states could require participation through ASMFC. Dr. Pierce noted that this could be considered by the RH/S ASMFC Management Board, but that funding would be a question. Mr. Stockwell was supportive, and noted the annual challenge to fund the MEDMR portside program; there is one sampler from Maine to New Jersey, and compliance has already been high. Mr. Kaelin thought that portside data should also be used to monitor the haddock catch cap, and felt that it is in the fleetôs best interest to participate.

> **Motion #4 (Grout/Kaelin):** The Herring Committee recommends that the Council supports the motion postponed from the September 2015 Council meeting regarding use of portside data to monitor river herring/shad catch caps, with the inclusion of using portside data to monitor the haddock catch caps.
>
> *Postponed motion from September 2015:"That because River herring/Shad bycatch in the sea herring fishery is monitored by NMFS solely from observer data, the Council requests NMFS include state portside monitoring of RH/S catch to determine that catch relative to the bycatch caps."*

Mr. Kaelin noted that the Council should get more information on the mix of species caught and haddock catch-at-age, suggesting a regular feed-back loop from the programs.

Public comment

Mr. Robbins ï Would the seiners be sampled? Just trawlers? [Mr. Grout noted that the purse seines do not have a catch cap for RH/S. Mr. Matt Cieri (MEDMR) clarified that the haddock caps apply to all gear types in the herring fishery.]

Mr. Ruhle ï This is another opportunity for the Study Fleet, which has the break-down of catch on a tow-by-tow basis. Compare the Study Fleet and portside sampled trips. There is a declaration before each trip and in returning to the dock, so there is not an opportunity to not declare if there is bycatch. On mandatory dockside sampling, there are very few ports not sampled. Determine which ports and how much landings are happening there. There is good compliance now, so making it mandatory is not necessary.

Mr. Kane ï I understand that it is voluntary. I have a question of Maine. Does the Maine sampler sample just for spawning herring or for river herring in Rockland, Maine? [Mr. Matt Cieri clarified that the sampling is biological, bycatch, and age-structured, Maine to New Jersey.]

Mr. Paquette ï I support the motion. Iôm on the ASMFC AP. Iôm confused on the Agencyôs response, because the species is jointly managed. With the majority of the ASMFC Management Board is at this and the Council table, that between them, NMFS, and ASMFC Management Board that we couldnôt figure out how to make it mandatory. If there is a will, there is a way.

Committee discussion

Ms. Nordeen noted that issues of data sets and timeliness can be overcome. Observer data is random and portside is opportunistic; resolving sample selection differences is the biggest hurdle to using the portside data. Mr. Kaelin wanted to avoid any detrimental effects to the portside and

bycatch avoidance programs. He would like to see Study Fleet data used more, noting a similar discussion by the Trawl AP. Mr. MacDonald clarified that it is possible for NMFS to require federal permit holders to participate in a state program to the extent that it exists. However, NMFS cannot mandate that the state program exist or control what it looks like.

Motion #4 **carried** on a show of hands (6/0/4).

FIVE-YEAR RESEARCH PRIORITIES FOR ATLANTIC HERRING, 2017-2022

Herring PDT update

Dr. Feeney explained that the Council will be deciding its research priorities for 2017-2011 and reviewed 2010-2014 Council research priorities and PDT recommendations for keeping all of the former priorities, but adding more socioeconomic priorities and improving methods for RH/S catch estimation methods.

Mr. Kaelin asked why the PDT suggests that volume-weight conversion research be a priority, noting work completed on this topic. Ms. Feeney clarified that this was suggestion from the NEFSC, approved in September 2015 by the Council for the 2016-2018 Research-Set-Aside priorities. Mr. Cieri spoke to the challenges of making such conversions. Mr. Kaelin wondered if the conversions would introduce more error than they would resolve.

Committee discussion

> **Motion #5 (Tooley/Kaelin):** For the 2017-2021 Council research priorities, the Herring Committee recommends the list of priorities provided in Table 5 of the December 10, 2015 Herring PDT meeting summary, with the highest priorities being those already identified as the 2016-2018 Research Set-Aside priorities (in the 2016-2018 Atlantic herring draft specifications).

Public comment

Mr. Brisson ï On the river herring, there seems to be a problem in state waters with the lack of it. Iôm sure the Director has more information on that. I donôt catch any at all these last few years. Is there any monitoring of the gear types that have access to the herring? How much are they catching? Are they being protected? [Ms. Feeney noted the data on catches of RH in the observer and portside data, and that there are bycatch caps.]

Ms. Erica Fuller (Earth Justice) ï Under that motion, would the PDTs recommendation to improve RH/S catch estimation be a high priority? [Ms. Feeney noted that it would not.] I oppose the motion and support the PDTôs recommendation to improve estimates for RH/S catch.

Committee discussion

Motion #5 **carried** on a show of hands (5/1/3).

Ms. Tooley noted, relative to the concerns about catch estimation methods, the NEFSC will have a workshop on that in the fall to review the methods, which is why she did not include it as a high priority in Motion #5.

GEORGES BANK HADDOCK CATCH CAP ACCOUNTABILITY MEASURE

Herring PDT update

Dr. Feeney explained that the Council has a 2016 priority to consider revising the accountability measure (AM) for the Atlantic herring fishery Georges Bank (GB) haddock catch cap. She explained the cap and AM. This cap was exceeded in 2015, so most of Area 3 and some of Area 1B have been closed since the end of October through April 2016.

Committee discussion

Ms. Tooley referred to AP motion #9, and that at the time of the closure, the estimates were 134%, then the numbers came down. Later in the year, very little haddock is typically caught, typically lowering the total estimates. The core problem, to her, is lack of data points (6 in 2015, with a CV of 75.4). Increasing the cap in 2016 will alleviate concerns, but low observer coverage is still a concern. She hoped for a single-focused framework action that would consider an approach similar to the yellowtail flounder AM in the scallop fishery ï that if the overall limit is not reached the scallop fishery can catch up to 150% of its cap.

> **Motion #6 (Tooley/Kaelin):** The Herring Committee tasks the Herring PDT with examining the potential for using the same approach of the Georges Bank yellowtail flounder cap accountability measure (AM) for the Atlantic sea scallop fishery for the Georges Bank haddock cap AM in the Atlantic herring fishery, and reviewing the current GB haddock AM area closure for its continued relevance (e.g., abundance/distribution of haddock within the area).

Rationale: Changing the percentage of the cap would involve the Groundfish Committee too much; they already have a full plate of priorities for 2016. The AM area should be reevaluated to determine if other boundaries would be more effective at protecting haddock. There have not been concerns with the Gulf of Maine haddock cap.

Public comment

Ms. Jennie Bichrest (Purse Line Bait, ME) ï I support the motion. If we had this, we could have saved a lot of heart ache with the herring fishery. It put more pressure in Area 1A and we used up the quota before we wanted to. It would help the lobster fishery a lot.

Mr. Gehan ï I also support the motion. The cap is preventing the herring fishery from achieving OY, and there is not a lot of biological support for it. The real issues and something that will take a low of candle powers to bone up the monitoring of the fleet due to one NGOs efforts to take away the flexibility to monitor the fishery. Due to the large variance in error in estimating the cap. 150% was appropriate for the yellowtail flounders, an overfished stock, but we are so far away from the haddock ACL, 200% or higher might be appropriate here to ensure herring OY is here.

Ms. Fuller ï Not speaking for or against; Iôm not opposed to giving the fleet more haddock so they can fish offshore. Can someone speak to the timing of Amendment 8 should this framework move forward? The timeline for Amendment 8 shouldnôt fall further behind.

Committee discussion

Ms. Feeney noted that Motion #6 does not preclude the need to work with the Groundfish Committee and PDT, and that the Committee and Council should identify its vision on timing. Ms. Tooley recalled that, at the December Council meeting, she did not support rolling this topic into Amendment 8, because that is a long-term action. Both should be worked on in 2016. The Council did not say stop working on Amendment 8. The PDT should speak to their workload, and it can be discussed at the Council meeting.

Public comment

Mr. Brisson ï The idea of having the cap is to do what itôs doing. Before the cap showed up, we were killing a lot of haddock. That why thereôs a cap. They might be small, but we have to think about the future and spawning fish. This plays a big part of it. The scallop plan is a different world. To throw this in there doesnôt make sense.

Mr. Tim Tower (groundfish charter fisherman, ME) ï This is apples and oranges. Shouldnôt piggy back this on the yellowtail thing. It increases incentive to target herring when haddock are there. The Council should be proud of its haddock program. Itôs one of the few success stories, where a small-boat fleet can fish on it. If we start fooling around this, we may lose the haddock, like we are losing our pollock.

Mr. Ben Martens (Maine Coast Fishermenôs Association) ï I donôt have an issue with looking at a couple options. Weôve seen a lot of problems between the scallop and groundfish fisheries over yellowtail ï every year this is something we have to fight over. Itôs not a model for success and sets bad precedent. We have to think about precedent setting for sharing resources. Scary path for who gets what for access and bycatch.

Ms. Bichrest ï My business is built on herring, but I didnôt think increasing the cap was fair at one point in time, but because of ruining the haddock fishery. Others explained the methodology and extrapolations. We donôt have enough observer coverage, itôs assumed that all the boats are catching haddock. Iôm hoping that the public understands that. The whole method is flawed. We donôt have the coverage. Using the portside data would be helpful. We could show trips from Georges that didnôt have haddock that were unobserved but sampled portside.

Mr. Steve Weiner ï Iôm not convinced that more observers would mean less haddock. To me, this is an effort to increase the haddock cap. Itôs crazy. There were tense moments, but lobstermen are less dependent on herring than they used to be, but they got through the season even though less than 80% of the TAC caught. Itôs a myth that the lobster fishery is dying for herring.

Mr. Ruhle ï There was a lot of discussion at the AP, and a motion to fix this before May. The issue is with the extrapolation. With 6 observed trips, we are sure that the haddock cap wasnôt reached. The industry believes that is the case. If the Herring and Groundfish plans were on the same calendar, this wouldnôt be an issue. The increase doesnôt come into place until May. The MAFMC should be screaming. The mackerel fishery is hampered by the cap that peaked in August-October. Thereôs a lot of Mid-Atlantic fish on the south of Georges. The herring and mackerel fisheries should be fishing now with minimal bycatch. Should have an EFP for determining bycatch in Area 3 in the early spring. I suspect that itôs a clean fishery this time of year. Itôs a mackerel issue as well.

Mr. Kane ï On the AP, I heard a lot about this. Iôve heard about how clean the fishery is and the midwater trawlers want to prove it. Would like to amend motion to do an emergency action to open the area with 100% observer coverage.

Committee discussion

Dr. Pierce commented on the problems facing the herring fishery in Area 3, moving them into Area 1A led to increased effort there. However, he felt the motion is a strategy that takes away incentive for vessels to avoid haddock and did not support the motion. He also wants to be consistent with his recent opposition to increasing the cap. Mr. Christopher supported the motion, noting that the herring AM is an in-season closure, different than the scallop AM; perhaps there could be a buffer like for the New Brunswick weir fishery; revising the closure boundary may need a groundfish action. Mr. Pappalardo supported increasing the cap rather than this approach, or perhaps use catch based on total observed catch. He would not support putting this work ahead of Amendment 8. Ms. Tooley noted that the cap started before the current ACL/AM structure, that this would help move effort offshore, and that the haddock ACL is not close to being caught, so haddock biomass is not a limiting factor. The herring vessels do not want to catch haddock. Her company has been in the bait business since 1944, and over 80% of the bait they supply is herring. Mr. Kaelin noted he began the discussion at the Groundfish Committee, thinking the herring cap could move to the Other Subcomponent. The public should understand that there are other fisheries with no AMs, because they are in the Other Subcomponent (e.g., whiting, squid). To him, the current AM is a spanking with no biological relevance, also keeping a mackerel fishery from occurring. The fleet agreed to not sell haddock. It must be discarded, so targeting haddock is a fallacy, and there needs to be flexibility in fishable areas. He felt that the real intent is to put the industry out of business. He recommended the AM to not be triggered until 125% of the cap had been taken and 50% or more of the GB haddock quota had been taken ï an AM sensitive to the level of haddock catches. He noted the two largest haddock year classes are coming through now, and current EFP negotiations about getting on Georges before May. Many haddock fishermen have offered to provide quota, but there is no mechanism for that. Mr. Balzano noted that the cap is going up substantially in 2016 and suggested that it solves the problem. Ms. Tooley indicated that it will help, but will not resolve the data issue. Mr. Balzano would rather work on that. Ms. Tooley indicated that there will not be more coverage; SBRM is already under-funded, and she doubted that the observer issue will not get resolved. Mr. Balzano was alarmed a fishery was shut down over six observed trips, but reluctantly supported the motion. Mr. Grout agreed that 6 observed trips is the issue, down from 70-80 trips; incorporating portside data and the 2016 cap increase may help, but AM revisions should be considered. Dr. McKenzie felt that Amendment 8 should be a higher priority.

Motion #6 **carried** on a show of hands (5/3/1).

OTHER BUSINESS

There was no other business.

The meeting adjourned at 5:15 PM.